

#### ABSTRACT OF THE DISCLOSURE

An arrayed waveguide grating including at least one first optical waveguide, a first slab waveguide, a plurality of arrayed waveguides, a second slab waveguide, and a plurality of second optical waveguides. The plurality of arrayed waveguides are connected to the at least one first optical waveguide via the first slab waveguide. Each of the plurality of arrayed waveguides has a different length. The plurality of second optical waveguides are connected to the plurality of arrayed waveguides via the second slab waveguide. At least one of the first and second slab waveguides is partitioned to first and second segments at a partition surface intersecting a path of light which travels through the arrayed waveguide grating. At least one of the first and second segments is configured to be slid along the partition surface to compensate an optical transmitting center wavelength of the light according to a temperature of the arrayed waveguide grating.